the dorsal surface; lodicules 2, each *c.* 0.30 x 0.25 mm, obovate, denticulate at apex; stamens 3, anthers 1-2 mm long, violet, filaments short; ovary *c.* 0.25 x 0.15 mm, ovate, glabrous; styles *c.* 0.5 mm long, stigmas *c.* 1 mm long, pink, feathery.

Holotype: Cannanore District, Bela (in between Kumbla and Bedudka), ± 100 m, 23rd November 1981, *P. V. Sreekumar* 71822 (CAL). Isotypes in K, MH. Paratype: Cannanore District, Paramba (on way to Bendudka), 16th October 1981, *P. V. Sreekumar* 71718 (MH).

Frequent in dry rocky areas and open grasslands, and other very dry localities along with other grasses such as *Arundinella mesophylla* Nees, *Bhidea burnsiana* Bor and a few *Dimeria* spp.

We thank Dr. Thomas A. Cope, The Herbarium — Grasses, Royal Botanic Gardens, Kew, for kindly examining our specimens and for his opinion.

FIRST RECORD OF *PARACOCCUS* EZZAT & MCCONNELL (HOMOPTERA: PSEUDOCOCCIDAE) FROM INDIA WITH DESCRIPTION OF A NEW SPECIES[1]

RAJENDRA KUMAR AVASTHI AND S. ADAM SHAFEE[2]

(With two text-figures)

The genus *Paracoccus* Ezzat & McConnell [with *P. burnerae* (Brain) and *P. nellorensis* sp. nov.] is reported for the first time from India. The new species is described and illustrated.

Genus *Paracoccus* Ezzat & McConnell

Paracoccus Ezzat & McConnell, 1956: 37.

Type-species: *Pseudococcus burnerae* Brain, 1915 (by original designation).

Ezzat & McConnell (1956) erected the genus *Paracoccus* for seven species. They assigned to their newly proposed tribe Planococcini on the basis of the presence of sclerotized bar on the ventral surface of the anal lobes. Later, De Lotto (1964) recognized this character as of specific significance. Further, he redefined the genus *Paracoccus* as follows: "Occurrence of a series of seventeen pairs of marginal cerarii, all normally built up with two spines and devoid of auxiliary setae, except on the anal lobe cerarii in which one or more auxiliary setae are always present".

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The genus *Paracoccus* [with *P. burnerae* (Brain) and *P. nellorensis* sp. nov.] is reported for the first time from India. It is represented by three species from Oriental region which are separated by the following key.

KEY TO ORIENTAL SPECIES OF *Paracoccus* EZZAT & MCCONNELL, BASED ON ADULT FEMALES

1. Antennae 7-8-segmented; body with 17 pairs of cerarii; oral-rim tubular ducts few on dorsum 2
— Antennae 9-segmented; body with 5-6 pairs of cerarii; oral-rim tubular ducts numerous on dorsum (Borchsenius, 1962: fig. 5)..... .....*P. pasaniae* Borchsenius
2. Antennae 8-segmented; circulus and sclerotized anal bar present; oral-rim tubular ducts 30-36 in number, single duct near most of the abdominal cerarii and some ducts scattered on median and submedian regions of the body (fig. 1; Ezzat & McConnell, 1956: fig. 11; De Lotto, 1967: fig. 6).....*P. burnerae* (Brain)

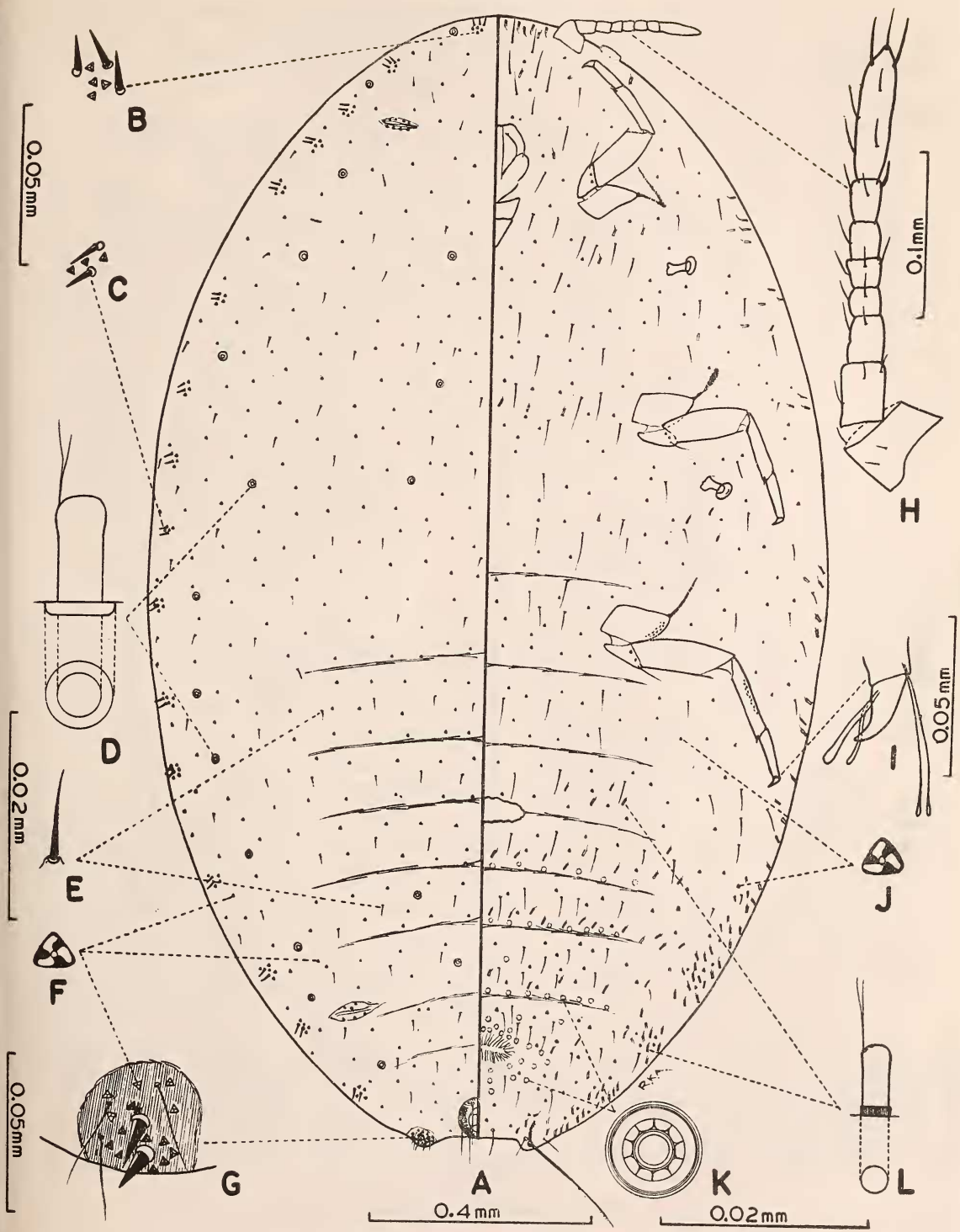

Fig. 1. (A-L): *Paracoccus burnerae* (Brain).

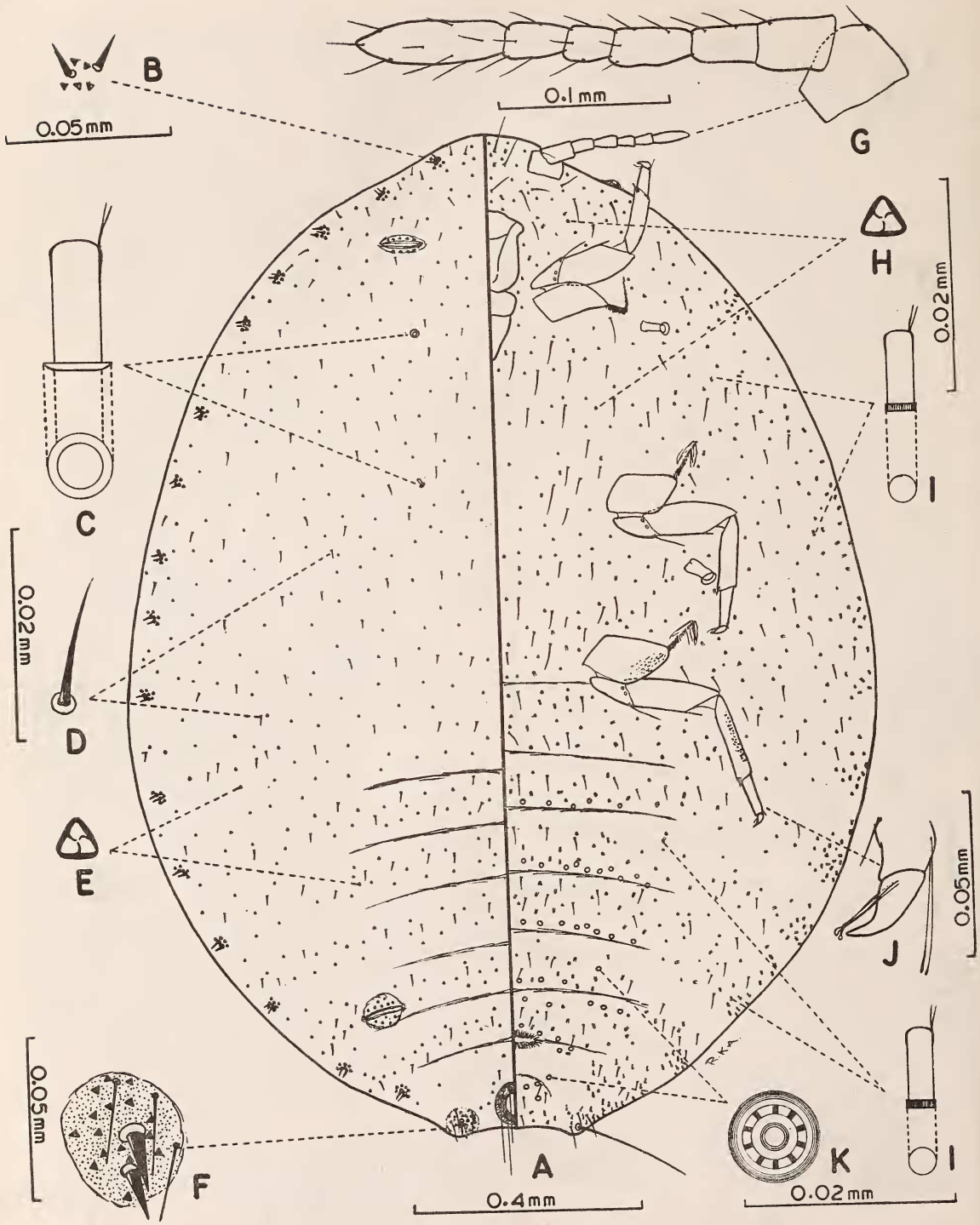

Fig. 2. (A-K): *Paracoccus nellorensis* sp. nov.

— Antennae 7-segmented; circulus and sclerotized anal bar absent; oral-rim tubular ducts 3-5 in number, confined to mid thoracic region (fig. 2) .....*P. nellorensis* sp. nov.

Paracoccus burnerae (Brain)
(Fig. 1 A-L)

Pseudococcus burnerae Brain, 1915: 111; Hall, 1937: 126; De Lotto, 1958: 89. *Pseudococcus simulator* James, 1933: 434; Ezzat & McConnell, 1956: 106. *Paracoccus burnerae* (Brain), Ezzat & McConnell, 1956: 39; De Lotto, 1964: 359; 1967: 13.

Material examined: 6 ♀, INDIA: Uttar Pradesh, Aligarh, University Campus, on *Dalbergia sissoo*, i. xi. 1979 (*R. K. Avasthi*). Material deposited in Zoological Museum, Aligarh Muslim University, Aligarh, India.

Paracoccus nellorensis sp. nov.
(Fig. 2 A-K)

ADULT FEMALE (fig. 2A):

Mounted specimens broadly oval in shape, less than one and a half times longer than wide (1.72: 1.32 mm); anal lobes moderately developed. Dorsum with small and thin setae (fig. 2D). Trilocular pores (fig. 2E) numerous, evenly distributed on cephalic and thoracic regions, segmentally arranged on abdominal region. Oral-rim tubular ducts (fig. 2C) only 3-5 in number confined to mid thoracic region. Ostioles well developed with membranous inner edges of anterior and posterior lips, each with 4-8 trilocular pores and devoid of setae. Body with 17 pairs of cerarii; anal lobe cerarii (fig. 2F) with basal area slightly sclerotized, each with a pair of stout conical spines, 3 auxiliary setae and a group of about 15 trilocular pores; cerarii anterior to anal lobe each with a pair of small spines; 4-7 trilocular pores and devoid of auxiliary setae. Anal ring with 6 setae which are about one and a half times longer than the greatest diameter of ring.

Venter with numerous hair-like setae of variable lengths; anal lobe without sclerotized bar; anal lobe seta about twice the length of anal ring setae. Trilocular pores (fig. 2H) sparsely distributed. Multilocular pores (fig. 2K) arranged medially in transverse rows on abdominal segments IV to IX. Oral-collar tubular ducts (fig. 2I) small, arranged in groups on margins of thoracic and abdominal regions and sparsely distributed in submarginal and median areas of the body. Oral-rim tubular ducts absent. Eyes well developed. Antennae (fig. 2G) 7-segmented, 0.29 mm in length. Rostrum dimerous. Spiracles normal. Circulus absent. Legs well developed; hind coxae and tibia with translucent pores; claws (fig. 2J) simple with digitules slightly longer than claw and clubbed at apices; dimensions of fore, mid and hind legs: trochanter + femur (0.17:0.19: 0.21 mm), tibia (0.11:0.12:0.15 mm) and tarsus (0.05:0.06:0.07 mm) respectively.

Holotype ♀. INDIA: Nellore, Andhra Pradesh, on weed plant, 14.iv.1979 (*R. K. Avasthi*).

Paratypes. 4 ♀, same data as holotype.

Types deposited in Zoological Museum, Aligarh Muslim University, Aligarh, India.

In the key to African species of *Paracoccus* proposed by De Lotto (1964), *P. nellorensis* sp. nov. seems close to *P. muraltiae* (Brain), but is distinguished by the presence of 7-segmented antennae, translucent pores on hind tibiae and oral-collar tubular ducts in groups on ventral margin of thoracic region.

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HEDYOTIS SILENT-VALLEYENSIS (RUBIACEAE) — A NEW SPECIES FROM SOUTH INDIA[1]

E. Vajravelu, N. C., Rathakrishnan and P. Bhargavan[2]

(With five text-figures)

During the botanical exploration in the Silent Valley R.F., Palghat District, Kerala in 1966 we collected a *Hedyotis* sp. on the grassy slopes of Kunthipuzha dam-site. On scrutiny and in consultation with Central National Herbarium, Howrah and Royal Botanic Gardens, Kew, it is described as a new taxon.

Hedyotis silent-valleyensis sp. nov.

Affinis *H. purpurascens* Hook. f. tamen differt foliis elliptico-lanceolatis, veinsque distinctis; ramulis, pedunculis, pedicellis et calycibus pubescentibus.

Hedyotis silent-valleyensis sp. nov. is allied to *H. purpurascens* Hook. f. [= *Oldenlandia purpurascens* (Hook. f.) Kuntze] but differs in having elliptic-lanceolate leaves with distinct veins; pubescence all over the branchlets, peduncles, pedicels and calyx.

Woody shrubs 1-3 m high, branching profusely towards the end of branches. Leaves opposite, decussate, shortly petioled, 2-9 x 0.6-2.0 cm, elliptic-lanceolate, acute-acuminate; nerves 3-4 pairs, distinct, puberulous beneath; stipules 4-10 x 3-5 mm, ovate-triangular, pubescent, 5-12 toothed; Inflorescence pubescent, paniculate cymes, branching trichotomously, 7.5-18.0 cm long; middle flowers sessile, side flowers pedicellate, rachis slender. Calyx pin-

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